

CLAIMS

- 1 1. A megasonic cleaning vessel for cleaning a semiconductor wafer,
2 comprising:
3 a top chamber wall;
4 a bottom chamber wall;
5 side walls extending between said top chamber wall and said
6 bottom chamber wall to provide a cleaning chamber;
7 a megasonic transducer provided in said cleaning chamber;
8 a pedestal extending upwardly from said bottom chamber wall for
9 supporting the semiconductor wafer; and
10 an electrical conduit provided through the cleaning vessel for
11 connecting an electrical cable to said megasonic transducer at
12 atmospheric pressure.
- 1 2. The megasonic cleaning vessel according to claim 1, further comprising a
2 transducer housing provided in said cleaning chamber, and adapted to
3 hold said megasonic transducer.
- 1 3. The megasonic cleaning vessel according to claim 2, wherein the electrical
2 conduit comprises a first electrical cable port provided through said top
3 chamber wall, and a second electrical cable port provided through said
4 transducer housing.
- 1 4. The megasonic cleaning vessel according to claim 3, wherein said
2 transducer housing is formed from a top housing wall, a bottom housing
3 wall, and an interior wall and exterior wall extending therebetween, said
4 second electrical cable port provided through said top housing wall.
- 1 5. The megasonic cleaning vessel according to claim 4, wherein the interior
2 wall is cylindrical and the exterior wall is cylindrical.

- 1 6. The megasonic cleaning vessel according to claim 4, wherein said first
2 electrical cable port and said second electrical cable port are joined to
3 form said electrical conduit using a sealing sleeve.
- 1 7. The megasonic cleaning vessel according to claim 6, wherein the sealing
2 sleeve is cylindrical.
- 1 8. The megasonic cleaning vessel according to claim 1 wherein the cleaning
2 chamber is adapted to receive carbon dioxide .
- 1 9. The megasonic cleaning vessel according to claim 8 wherein the
2 megasonic transducer is adapted to conduct megasonic energy to the
3 carbon dioxide in the supercritical state.
- 1 10. The megasonic cleaning vessel according to claim 9 wherein the electrical
2 conduit is isolated from the supercritical carbon dioxide .